

Application No. : 10/632,012
Amdt. Dated : February 21, 2006
Reply To O.A. Of : November 22, 2005

REMARKS

The Applicants thank the Examiner for his careful and thoughtful examination of the present application. By way of summary, Claims 21-36 were pending in this application. Accordingly, Claims 21-36 remain pending for consideration.

Rejection of Claims 21-24, 27-30, and 33-36 under 35 U.S.C. § 102(b)

The Office Action rejected Claims 21-24, 27-30, and 33-36 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,974,591, issued to Awazu et al., the '591 patent. The Applicants respectfully traverse this rejection because the '591 patent fails to identically teach or suggest every element of the claims. See M.P.E.P. § 2131 (stating that in order to anticipate a claim, a prior art reference must identically teach every element of the claim).

Claims 21-24 and 27-30

Claims 21 and 27 recite:

21. A sensor circuit comprising:

a circuit substrate;

a pair of pads disposed on an optical portion of said circuit substrate;

a plurality of pinouts disposed on a connector portion of said circuit substrate; and

a plurality of conductive paths providing electrical communication between said pads and said pinouts, said pads configured to mechanically mount a corresponding pair of optical components to said circuit substrate and to electrically connect said components to said conductive paths, at least one of said pads adapted to mount one of said components at either a first spacing or a second spacing from the other one of said components, said second spacing being greater than said first spacing by a predetermined amount.

27. A sensor circuit comprising:

a flexible circuit substrate;

Application No. : 10/632,012
Amdt. Dated : February 21, 2006
Reply To O.A. Of : November 22, 2005

a first pad disposed on said substrate and configured to mount a detector; and

a second pad disposed on said substrate and configured to mount an emitter, at least one of said first pad and said second pad adapted so that a detector-emitter spacing is a first distance or a second distance depending on the placement of at least one of said detector and said emitter, said first distance and said second distance predetermined so as to accommodate particular sensor types.

The Examiner found that the pad 12 of the '591 patent anticipates the "at least one of said pads adapted to mount one of said components at either a first spacing or a second spacing from the other one of said components" recited in Claim 21 and the "at least one of said first pad and said second pad adapted so that a detector-emitter spacing is a first distance or a second distance depending on the placement of at least one of said detector and said emitter" recited in Claim 27. The Applicants respectfully object to the Examiner's characterization that the pad 12 is configured to mount an emitter at either the 2a or 2b positions. There is no teaching or suggestion in the '591 patent that the pad 12 could be adapted to mount components at different spacings. The light emitter 2 has two light emitting diodes transmitting two different wavelengths, one of which is used as a reference. See the '591 patent at col. 3, ll. 55-60. Thus, the '591 patent does not teach or suggest that the pad 12 is configured to mount an emitter at *either* the 2a or 2b positions, but instead discloses that the pad is configured to mount an emitter at *both* the 2a and 2b positions.

By contrast, the pads recited by Claims 21 and 27 are adapted to accommodate different sensor types for different sized patients, for example neonate and infant, or different tissue site thicknesses, for example finger and foot. See ¶ [0047] of the application. As the pad 12 of the '591 patent is not "adapted to mount one of said components at either a first spacing or a second spacing from the other one of said components" or "adapted so that a detector-emitter spacing is a first distance or a second distance depending on the placement of at least one of said detector and said emitter," the Applicants submit that Claims 21 and 27 are not anticipated by the '591 patent and respectfully request that the Examiner withdraw the rejections.

Application No. : 10/632,012
Amdt. Dated : February 21, 2006
Reply To O.A. Of : November 22, 2005

Claims 22-24 and 28-30, which depend from Claims 21 and 27, respectively, are believed to be patentable for the same reasons articulated above with respect to Claims 21 and 27, and because of the additional features recited therein. Therefore, the Applicants respectfully request that the Examiner also withdraw the rejections of Claims 22-24 and 28-30.

Claims 33-36

Claim 33 recites:

33. A sensor circuit method comprising the steps of:
- predetermining a plurality of optical component spacings based upon a corresponding plurality of sensor types, said sensor types indicative of tissue site location and patient size;
 - configuring a pad to fixedly mount and electrically connect an optical component to a flexible circuit at a plurality of positions, said positions corresponding to said spacings; and
 - mounting said optical component to a particular one of said positions to construct a particular one of said sensor types.

The Examiner found that the sensor circuit method of the '591 patent anticipates "predetermining a plurality of optical component spacings based upon a corresponding plurality of sensor types" of Claim 33. The Applicants respectfully object to the Examiner's characterization of the description of Figs. 8a-8c. The emitter 2 and the receptor 3 can be put in exactly opposite positions to each other by aligning the mark 9a located right behind the emitter 2 with the mark 9b located right behind the receptor 3. The photosensor is in a fixed position. The marks 9a and 9b thus allow the same emitter and the same receptor to be put in right positions irrespective of the length of the nail and the shape of the finger. See the '591 patent at col. 5, ll. 52-59. Thus, there is no teaching or suggestion in the '591 patent of a plurality of sensor types or a method of predetermining a plurality of optical component spacings corresponding to those sensor types.

By contrast, the method recited by Claim 33 predetermines a plurality of optical component spacings based upon a corresponding plurality of sensor types. For example, the component spacing is different between a neonate sensor and an infant

Application No. : 10/632,012
Amdt. Dated : February 21, 2006
Reply To O.A. Of : November 22, 2005

sensor. See [0047] & Figs. 11A-11B of the application. As the method of the '591 patent does not predetermine "a plurality of optical component spacings based upon a corresponding plurality of sensor types," the Applicants submit that Claim 33 is not anticipated by the '591 patent and respectfully request that the Examiner withdraw the rejection.

Claims 34-36, which depend from Claim 33, are believed to be patentable for the same reasons articulated above with respect to Claim 33, and because of the additional features recited therein. Therefore, the Applicants respectfully request that the Examiner also withdraw the rejections of Claims 34-36.

Response to Rejections under 35 U.S.C. § 103(a)

The Office Action rejected Claims 21, 25-27, 31, and 32 under 35 U.S.C. § 103 as being unpatentable over the '591 patent. The Applicants respectfully traverse this rejection for the following reasons.

Claims 21, 25, and 26

As described above, Claim 21 is not anticipated by the '591 patent. Claims 25 and 26 depend from Claim 21. Thus, Claims 25 and 26 each include all of the features of Claim 21 and recite a unique combination of features not taught or suggested by the cited art. No reference has been provided that make up for the deficiencies of the '591 patent. Therefore, the Applicants respectfully request that the Examiner withdraw the rejections of Claims 21, 25, and 26.

Claims 27, 31, and 32

As described above, Claim 27 is not anticipated by the '591 patent. Claims 31 and 32 depend from Claim 21. Thus, Claims 31 and 32 each include all of the features of Claim 27 and recite a unique combination of features not taught or suggested by the cited art. No reference has been provided that make up for the deficiencies of the '591 patent. Therefore, the Applicants respectfully request that the Examiner withdraw the rejection of Claims 27, 31, and 32.

Application No. : 10/632,012
Amdt. Dated : February 21, 2006
Reply To O.A. Of : November 22, 2005

Summary

The Applicants respectfully submit that, for the reasons provided above, all of the pending Claims are in condition for allowance. The Applicants respectfully request that the Examiner withdraw the rejections of the pending Claims and pass the application to allowance. If further issues remain to be resolved, the Applicants' undersigned attorney of record hereby formally requests a telephone interview with the Examiner. The Applicants' attorney can be reached at (949) 721-2946 or at the number listed below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: February 21, 2006

By: 

John M. Grover
Registration No. 42,610
Attorney of Record
(949) 760-0404

2381200
021606